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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/066,750

02/06/2002

Hideki Kishi

2002\_0210A

4772

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7590

09/01/2004

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

LUK, LAWRENCE W

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/066,750	<b>Applicant(s)</b> KISHI ET AL.	
	<b>Examiner</b> Lawrence W Luk	<b>Art Unit</b> 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 3 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. The indicated allowability of claims 4, 6, 8 and 12 are withdrawn in view of the newly discovered reference(s) to Kayano et al. (5,614,804) and Kalogeropoulos et al. (6,194,874). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kayano et al. (5,614,804).

As to claim 1, Kayano et al. disclose in Abstract, a residual capacity correction method for a battery, the method comprising: making a count of one cycle each time an accumulated quantity of a charge capacity of a battery reaches a set capacity; and decreasing a learning capacity by a specified cycle degradation capacity per charge of the one cycle.

As to claims 2 and 10, Kayano et al. disclose in column 11, lines 52-57, the set capacity is the learning capacity of the battery.

As to claims 5 and 7, Kayano et al. disclose in column 2, line 64 to column 3, line 18, a residual capacity correction method comprising: specifying a decreasing rate of a learning capacity as a keeping degradation capacity while a keeping temperature and a residual capacity of the battery are used as parameters; and decreasing, as a keeping

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time passes, the learning capacity by the keeping degradation capacity specified from the keeping temperature and the residual capacity of the battery.

As to claims 6 and 8, Kayano et al. disclose in figures 3A, 3B, 4A, 4B, 5A, 5B, column6, lines17-45, the keeping degradation capacity per unit time is stored as a table while the keeping temperature and the residual capacity of the battery are made the parameters, the keeping degradation capacity per unit time is judged from the table, and the learning capacity in a keeping state is corrected.

As to claim 9, Kayano et al. disclose in Abstract, a count of one cycle is made each time an accumulated quantity of a charge capacity of the battery reaches a set capacity.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayano et al. (5,614,804) in view of Kalogeropoulos et al. (6,194,874).

As to claims 4 and 12, Kayano et al. disclose all of the claim limitations except for the battery is a lithium ion secondary battery.

Kalogeropoulos et al. disclose in column 1, lines 33-50 that lithium ion batteries have many advantages over nickel base battery systems, including higher energy density and lighter weight.

It would have been obvious to person having ordinary skill in the art at the time of the invention to use a lithium ion type battery in the residual capacity correction method of Kayano et al. since lithium ion batteries have higher energy density and lighter weight than nickel based batteries.

#### ***Allowable Subject Matter***

6. Claims 3 and 11 are objected to as being dependent upon a rejected base claim. The prior art of record fails to teach or reasonably suggest that

As to claims 3 and 11, the cycle degradation capacity is made 0.003 to 0.15% of the learning capacity of the battery.

Claims 3 and 11 would be allowable if rewritten in independent form including all of the limitations of the base claim.

#### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWL

August 30, 2004

*Lawrence Holt*  
*examiner*  
*8/30/04*